

1 CCCACGCGTC CGCATAAATC AGCAGCGGC CGGAGAACCC CGCAATCTCT GCGCCACAA AATACACCGA CGATGCCCGA TCTACTTTAA GGGCTGAAC  
GGGTGGCAG GCGTATTAG TCGTGGCCG GCCTCTTGG GCCTTAGAGA CGCGGTGTT TATGTGGCT GTACGGGCT AGATGAAATT CCCGACTTTG

101 CCACGGGCT GAGAGACTAT AAGAGCGTTC CCTACCGCA TGAACAACG GGGACAGAAC GCGCCGGCG CTTCCGGGGC CCGGAAAAGG CACGGCCCG  
GCTGCCCGA CTCTCTGATA TTCTCGCAAG GGATGGCGT ACCTTGTTG CCCTGTCTTG CCGGGCCGGC GAAGCCCCG GGCCTTTTCC GTGCCGGGTC

1 M etGluGlnAr gGlyGlnAsn AlaProAla laSerGlyAl aArgLysArg HisGlyProGly

201 GACCCAGGA GCGCGGGGA GCCAGGCTG GGCTCCGGGT CCCAAGACC CTTGTGCTCG TTGTGCGCGC GTTCTGCTG TTGGTCTCAG CTGAGTCTGC  
CTGGGTCCCT CCGCGCCCT CCGTCCGGAC CCGAGGCCCA GGGTCTCTG GAACACGAGC AACAGCGCG CCAGACGAC AACACAGATC GACTCAGACG

22 ProArg1 uAlaArgGly AlaArgProG lyLeuArgVa lProLysThr LeuValLeuValAlaAla lValLeuLeu LeuValSerA laGluSerAla

301 TCTGATCACC CAACAAGACC TAGTCCCA TAGCAGAGAG GCGCCACAAC AAAAGAGGTC CAGCCCTCA GAGGATTGT GTCCACCTGG ACACCATATC  
AGACTAGTG GTTGTCTTGG ATCGAGGGT CGTCTCTCG CCGGTCTCG TTTTCTCCAG GTCCGGGAGT CTCCTAACA CAGGTGACC TGTGGTATAG

55 LeuIleThr GlnGlnAspL euAlaProG l nGlnArgAla AlaProGln l nLysArgSe rSerProSer GluGlyLeuC ysProProG l yHisHisIle

401 TCAGAAGAC GTAGAGATTG CATCTCTGC AAATATGGAC AGGACTATAG CACTCACTGG AATGACCTCC TTTTCTGCTT GCGCTGCACC AGGTGTGATT  
AGTCTTCTGC CATCTCTAAC GTAGAGGACG TTTATACCTG TCCTGATATC GTGAGTGACC TTAAGACGAA CCGCAGGTGG TCCACACATA

88 SerGluAspG lyArgAspCy sIleSerCys LysTyrGlyG l nAspTyrSe rThrHisTrp AsnAspLeuL euPheCysLe uArgCysThr ArgCysAspSer

501 CAGGTGAAGT GGAGTAAGT CCCTGCACCA CGACCAGAA CACAGTGTGT CAGTCCGAG CAGCACCTT CCGGGAAGAA GATTCTCTG AGATGTGCCG  
GTCCACTTCA CCGGATTCA GGGACGTGGT GCTGGTCTTT GTGTACACA GTACAGCTTC TTCCGTGGAA GGCCTTCTT CTAAGAGGAC TCTACACGGC

122 GlyGluVa lGluLeuSer ProCysThrT hrThrArgAs nThrValCys GlnCysGluG luGlyThrPh eArgGluGlu AspSerProG luMetCysArg

601 GAAGTCCGC ACAGGTGTC CCAGAGGGAT GGTCAAGGTC GGTGATTGTA CACCTGGAG TGACATCGAA TGTCTCCACA AAGAATCAGG CATCATATA  
CTTCACGGC GTGCCACAG GGTCTCCCTA CCAGTCCAG CCACATAACAT GTGGGACCTC ACTGTAGCTT ACACAGGTGT TTTCTTAGTCC GTAGTAGTAT

155 LysCysArg ThrGlyCysP roArgGlyMe tValLysVal GlyAspCysT hrProTrpSe rAspIleGlu CysValHisL ysGluSerGl yIleIleIle

701 GGAGTCACAG TTGACGCCGT AGTCTTGATT GTGGCTGCTT TTGTTTGCA GTCTTTACTG TGAAGAAAG TCCTTCTTA CCTGAAAGGC ATCTGCTCAG  
CCTCAGTGC AACGTGGCA TCAGAACTAA CACCGACACA AACAACGTT CAGAAATGAC ACCTTCTTC AGGAAGGAAT GGACTTTCCG TAGACGAGTC

188 GlyValThrV alAlaAlaVa lValIleIle ValAlaValP heValCysL ys sSerLeuLeu TrpLysLysV alLeuProTy rLeuLysGly IleCysSerGly

FIG.-1A

801 GTGGTGGTGG GGACCCCTGAG CGTGTGGACA GAAGCTCACA ACGACCTGGG GCTGAGGACA ATGTCCTCAA TGAGATCGTG AGTATCTTGC AGCCACACCCA  
 CACCACCACC CCTGGGACTC GCACACCTGT CTTCGAGTGT TGCTGGAGCC CGACTCCTGT TACAGGAGTT ACTCTAGCAC TCATAGAACG TCGGGTGGGT  
 222 GlyGlyG1 yAspProGlu ArgValAspA rgSerSerG1 nArgProGly AlaGluAspA snValLeuAs nGluIleVal SerIleLeuG lnProThrGln  
 901 GGTCCCTGAG CAGGAAATGG AAGTCCAGGA GCCAGCAGAG CCAACAGGTG TCAACATGTT GTCCCCCGGG GAGTCAGAGC ATCTGCTGGA ACCGGCAGAA  
 CCAGGGACTC GTCCTTTTACC TTCAGGTCCT CGGTCTCTC GGTGTTCAC AGTTGTACAA CAGGGGGCCC CTCAGTCTCG TAGACGACCT TGGCCGTCCT  
 255 ValProGlu GlnGluMetG luValGlnG1 uProAlaGlu ProThrGlyV alAsnMetIe uSerProGly GluSerGluH isLeuLeuG1 uProAlaGlu  
 1001 GCTGAAAGGT CTCAGAGGAG GAGGCTGCTG GTTCCAGCAA ATGAAGGTGA TCCCACTGAG ACTCTGAGAC AGTCTTTCGA TGACTTTGCA GACTTGTGTC  
 CGACTTTCCA GAGTCTCCTC CTCGACGAC CAAGGTCGTT TACTTCCACT AGGCTGACTC TGAGACTCTG TCACGAAGCT ACTGAAACGT CTGAACCCAGC  
 288 AlaGluArgS erGlnArgAr gArgLeuLeu ValProAlaA snGluGlyAs pProThrGlu ThrLeuArgG lnCysPheAs pAspPheAla AspLeuValPro  
 1101 CCTTTGACTC CTGGGAGCCG CTCATGAGGA AGTTGGGCCT CATGGACAAT GAGATAAAGG TGGCTAAAGC TGAGGCAGCG GGCACACAGG ACACCTTGTA  
 GGAAGACTGAG GACCTCGGC GAGTACTCCT TCAACCCGGA GTACCTGTTA CTCTATTTCC ACCGATTTCC ACTCCGTCGC CCGGTGTCCC TGTGGAACAT  
 322 PheAspSe rTrpGluPro LeuMetArgL ysLeuGlyLe uMetAspAsn GluIleLysV alAlaLysAl aGluAlaAla GlyHisArgA spThrLeuTyr  
 1201 CACGATGCTG ATAAAGTGGG TCAACAAAAC CGGGCGAGAT GCCTCTGTCC ACACCTGCTG GATGCCTTG GAGACGCTGG GAGAGAGACT TGCCAAGCAG  
 GTGCTACGAC TATTTACACC AGTTGTGTTG GCCCGCTCTA CGGAGACAGG TGTGGGACGA CCTACGGAAC CTCTCTCTGA ACGGTTCTGC  
 355 ThrMetLeu IleLysTrpV alAsnLysTh rGlyArgAsp AlaSerValH isThrLeuLe uAspAlaLeu GluThrLeuG lyGluArgLe uAlaLysGln  
 1301 AAGATTGAGG ACCACTTGTT GAGCTCTGGA AAGTTCATGT ATCTAGAAGG TAATGCAGAC TCTGCCWTGT CCTAAGTGTG ATTCTCTTCA GGAAGTGAGA  
 TTCTAACTCC TGGTGAACAA CTCGAGACCT TTCAAGTACA TAGATCTTCC ATTACGCTCG AGACGGAACA GGATTTCACAC TAAGAGAAGT CCTTCACCTC  
 388 LysIleGluA spHisLeuLe uSerSerGly LysPheMetT yrLeuGluG1 yAsnAlaAsp SerAlaXaaS erOC\*  
 1401 CCTTCCCTGG TTTTACCTTTT TTCTGGAAAA AGCCCAACTG GACTCCAGTC AGTAGGAAAG TGCCACAATT GTCAATGAC CGGTACTGGA AGAACTCTC  
 GGAAGGGACC AAATGGAAAA AAGACCTTTT TCGGGTTGAC CTGAGGTCAG TCATCCTTTT CCGGTGTAA CAGTGTACTG GCCATGACCT TCTTTGAGAG  
 1501 CCATCCAACA TCACCCAGTG GATGGAACAT CCTGTAACCT TTCACTGCAC TTGGCATTAT TTTTATAAGC TGAATGTGAT AATAAGGACA CTATGGAAT  
 GGFAGGTGT AGTGGGTCAC CTACCTTGTA GGACATTGAA AAGTGACGTG AACCGTAATA AAAATATTCCG ACTTACACTA TTATTCTCTGT GATACCTTTA

FIG.-1B

1601 GTCTGGATCA TTCCGTTTGT GCGTACTTGT AGATTGTTT TGGATGTCAC AGCACTTTT TATCCTAATG TAAATGCTTT ATTATTTAT  
 CAGACCTAGT AAGGCAACA CGCATGAAC TCTAAACCAA ACCCTACAGT AACAAAAGTG TCGTAAAAA ATAGGATTAC ATTTACGAAA TAAATAAATA

1701 TTGGGTACA TTGTAAATC CATCTACAA AAAAAAAA GCGCGCGCG ACTCTAGAGT CGACCTCAG AGCTTGGCC GCCATGGCC  
 AACCCGATG AACATTCTAG GTAGATGTT TTTTITTTT CCGCGCGCG TGAGATCTCA GCTGGACGTC TTCCAACCGG CCGTACCGG

FIG.-1C

1 MEQRGONAPAAAGARKRHGPGPREARGARGLRVPKTLVVAALLVSAESALITQQD  
 61 LAPQRAAPQQRSSPSEGLCPPGHHISEDGRDCISCKYQDYSTHWNDDLFLCLRCTRCD  
 121 SGEVELSPCTTRNTVCQCEGTFREEDSPCMCRKRTGCPGMVKVGDCTPWSIDIECVH  
 181 KESGIIIGVTAAAVLIVAVFVCKSLMKVLPYLKICSGGGGDPERVDRSSQRPGEAD  
 241 NVLNEIVSILQPTQVPEQEMEVEPAEPTGVNMLSPGESEHLLLEPAEAERSQRRLLVPA  
 301 NEGDPTELRCQCFDDFADLVPFDSWELMRKGLMDNEIKVAKAEAGHRDLYTMLIKW  
 361 VNKTGRDASVHTLLDALETGLERLAKQKIEDHLLSSGKFMYLEGNADSALS

FIG.-2A

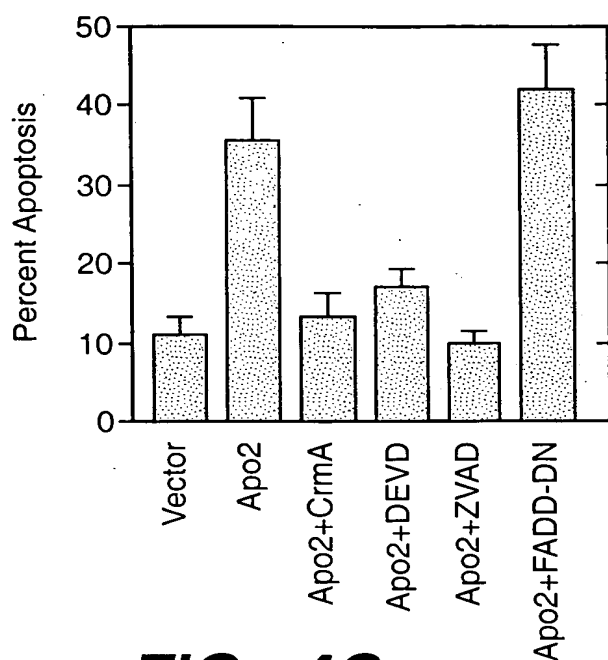
Apo2	FADLVPFDSWEP	LMRKLGLMDNEIKVAKAEAA	--GHRDTL
DR4	FANIVPFDSWDQLMRQLDLTKNEIDVVRAGTA	--GPGDAL	
Apo3/DR3	VMDAVPARRWKKEFFVRLTGLREAEIEAVEVEIGR	--FRDQQ	
TNFR1	VVENVPPLRWKKEFFVRLGLSDHEIDRLQLNGR	--CLREAQ	
Fas/Apo1	IAGVMTLSQVKGFFVRKNGVNEAKIDEIKNDNVQD	TAEQKV	

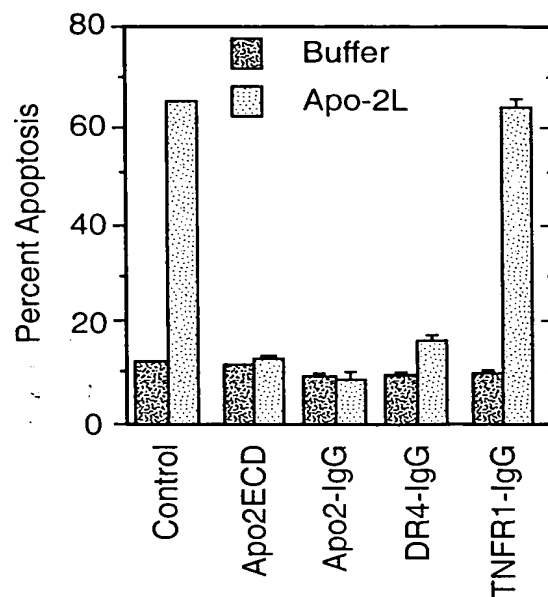
Apo2	YTMILIKWVNKTGRD	ASVHTLLD	LALETGLERLAKQKIED
DR4	YAMLKWKVNKTGRN	ASVHTLLD	LALETGLERLAKQKIED
Apo3/DR3	YEMLKRWRRQQP	--AGLGA	VYAALERMGLDGCVEDLRS
TNFR1	YSMLATWRRRTTPRRREATL	LELGRV	LRDMMDLLGLCLDIEE
Fas/Apo1	-QLLRNWHQLHGKKEAY	-DTLLIKD	LKKANLCTLAEKIQ

FIG.-2B

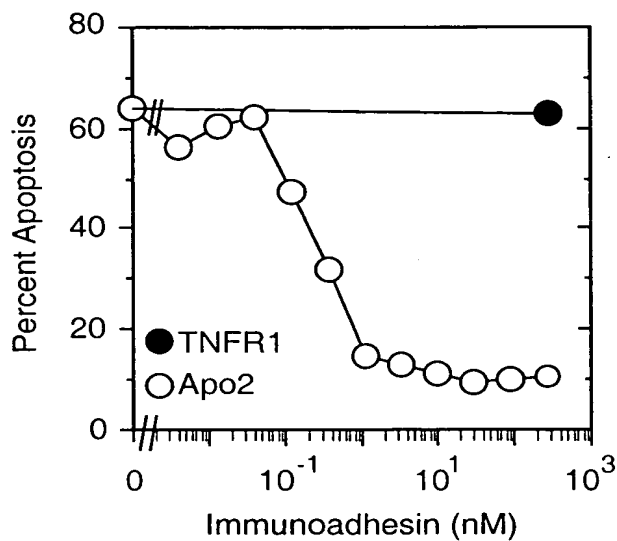




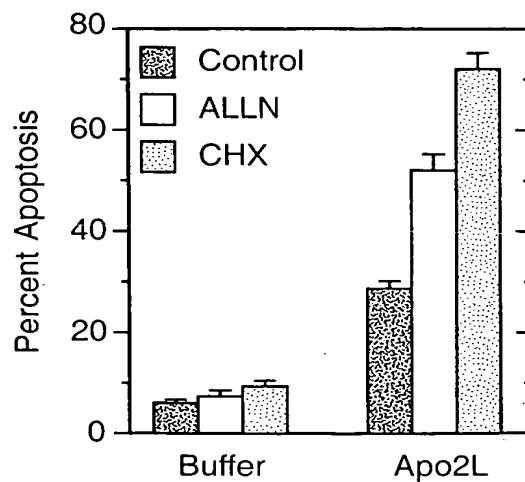
**FIG.\_4C**



**FIG.\_4D**



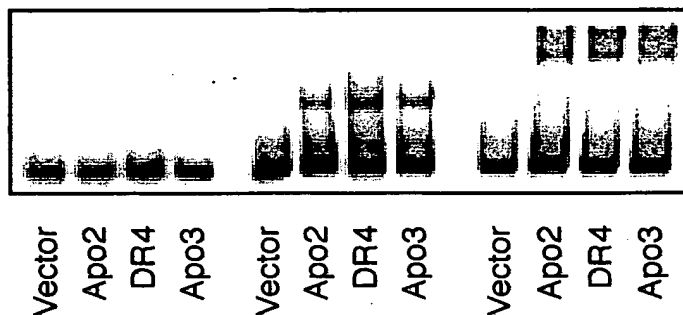
**FIG.\_4E**



**FIG.\_5C**

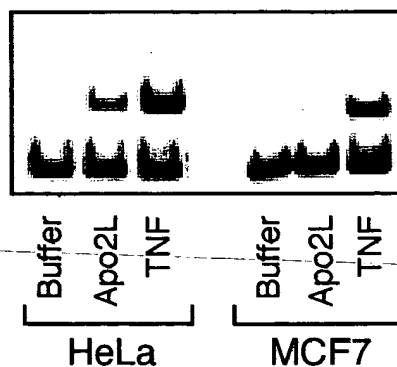
Unlabelled probe	+	+	+	+	-	-	-	-	-	-	-	-
Labelled probe	+	+	+	+	+	+	+	+	+	+	+	+
Anti-p65	-	-	-	-	-	-	-	-	+	+	+	+

**FIG.\_5A**

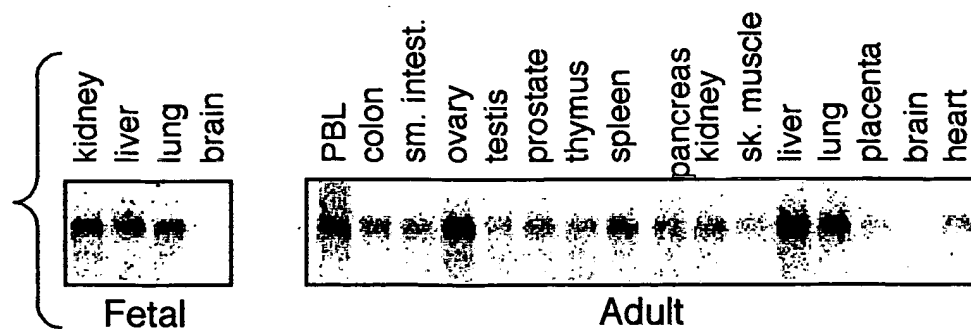


Unlabelled probe	-	-	-	-	-	-
Labelled probe	+	+	+	+	+	+
Anti-p65	-	-	-	-	-	-

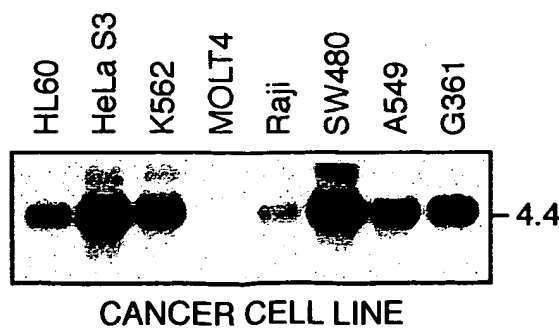
**FIG.\_5B**

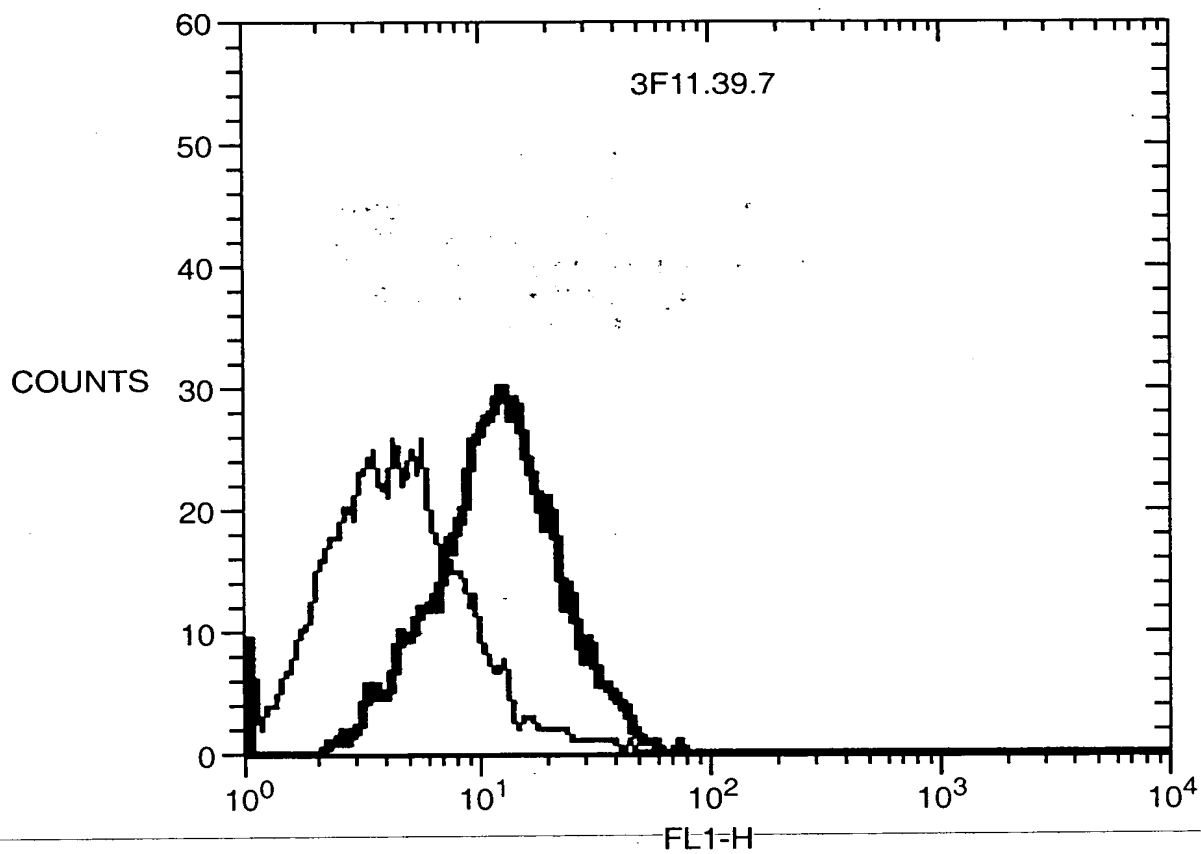


**FIG.\_6A**



**FIG.\_6B**

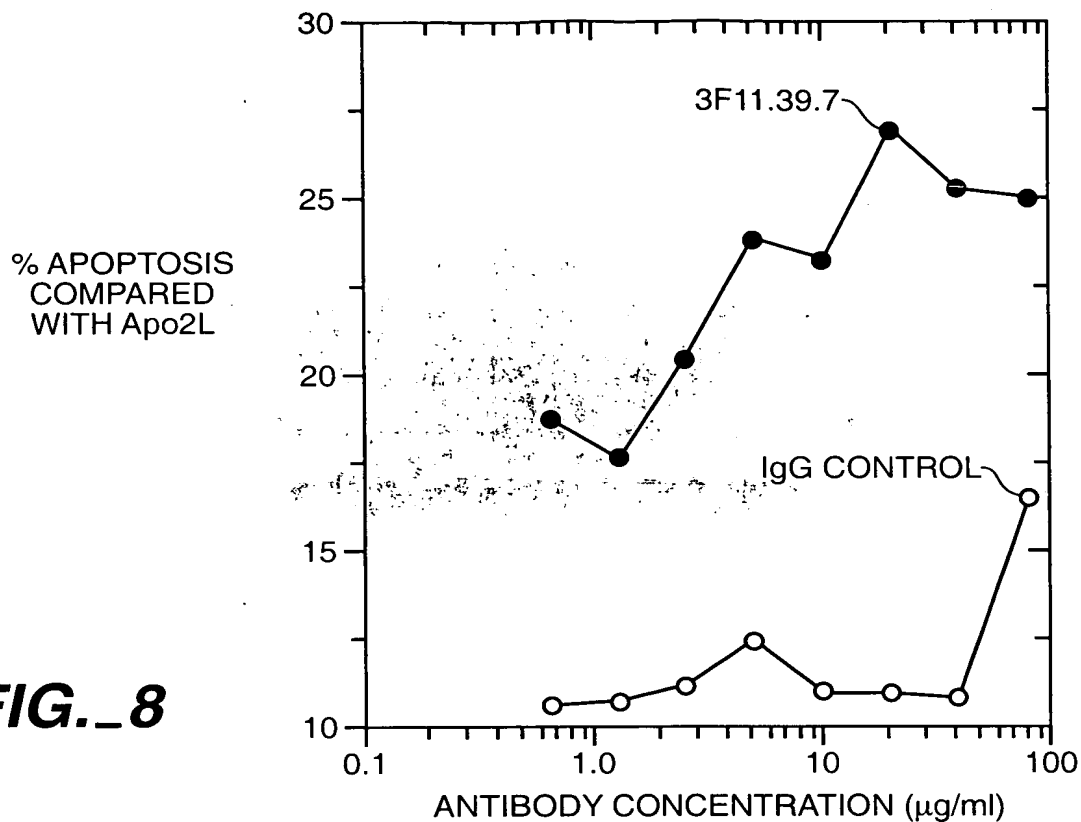




**FIG. 7**

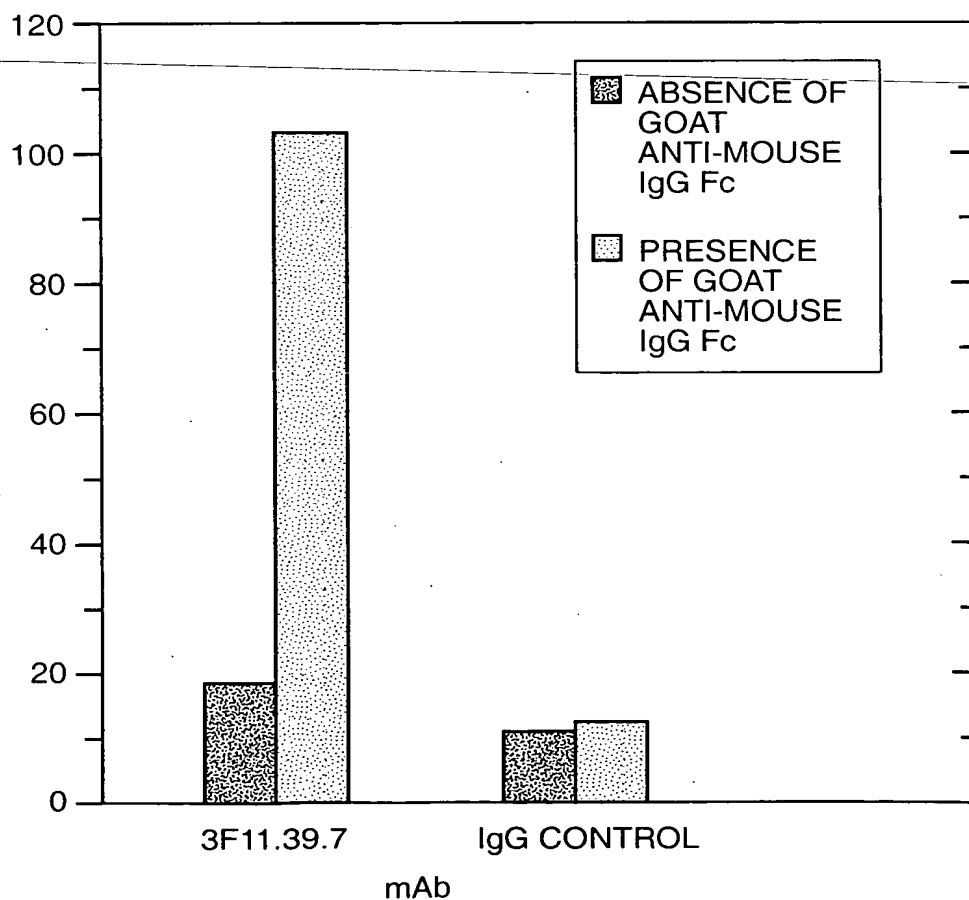
+

**FIG.\_8**



% APOPTOSIS  
COMPARED  
WITH Apo2L  
(1 µg)

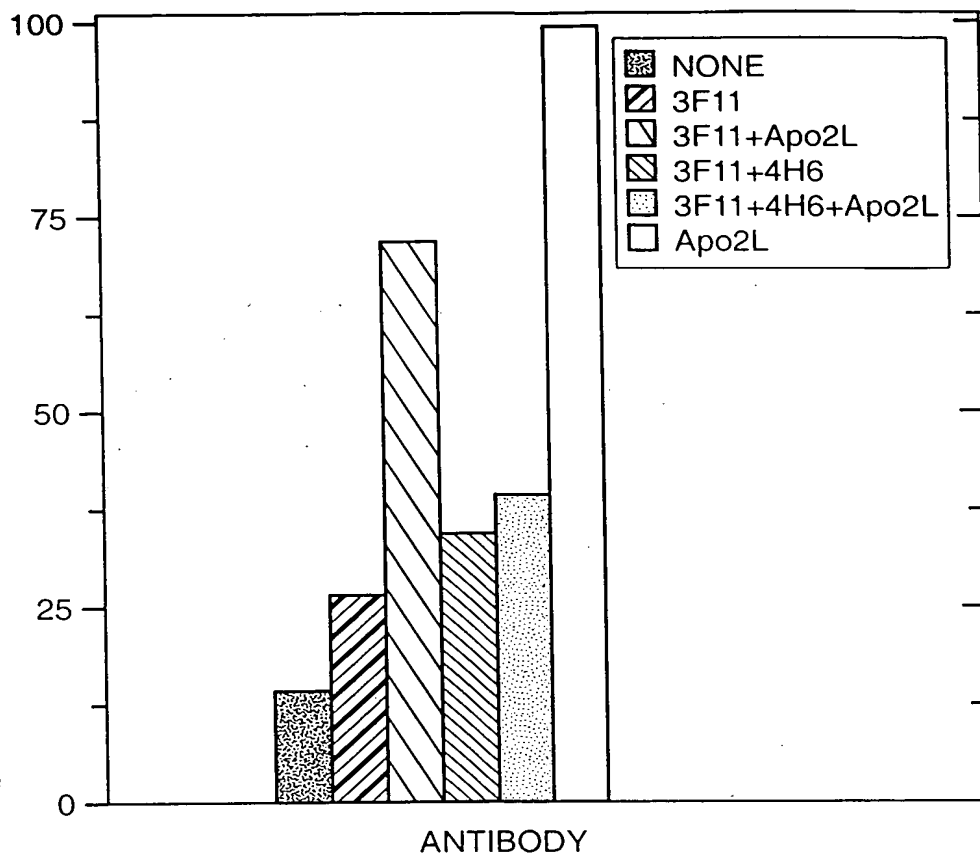
**FIG.\_9**





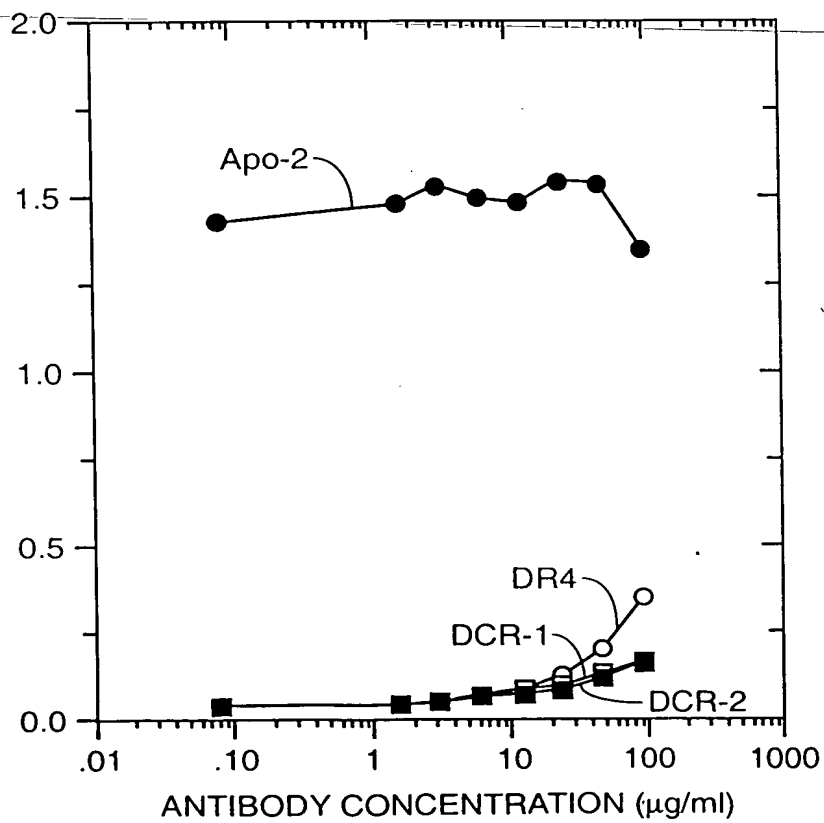
% APOPTOSIS  
OF 9D CELLS

**FIG.\_10**

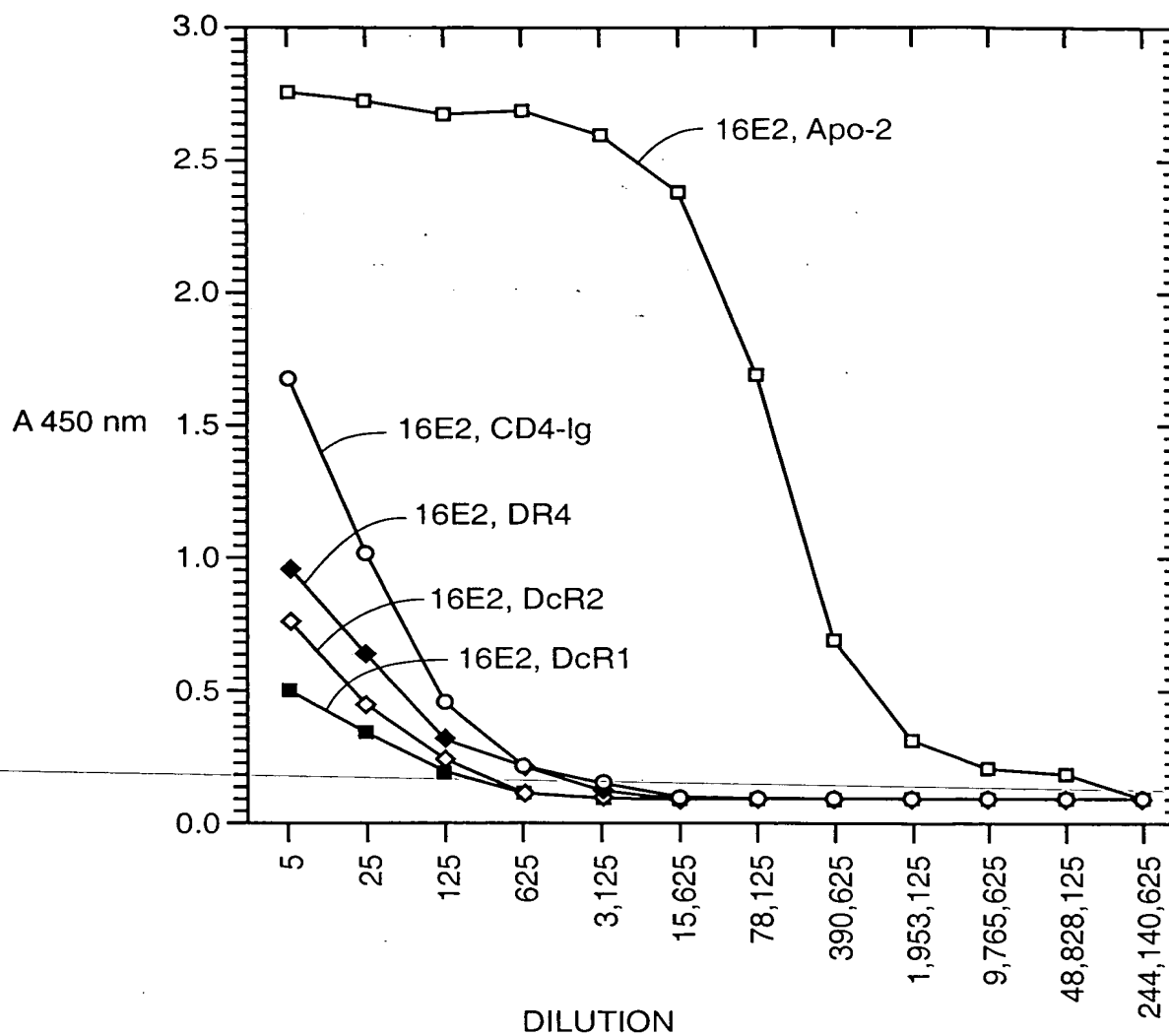


OD 450/620

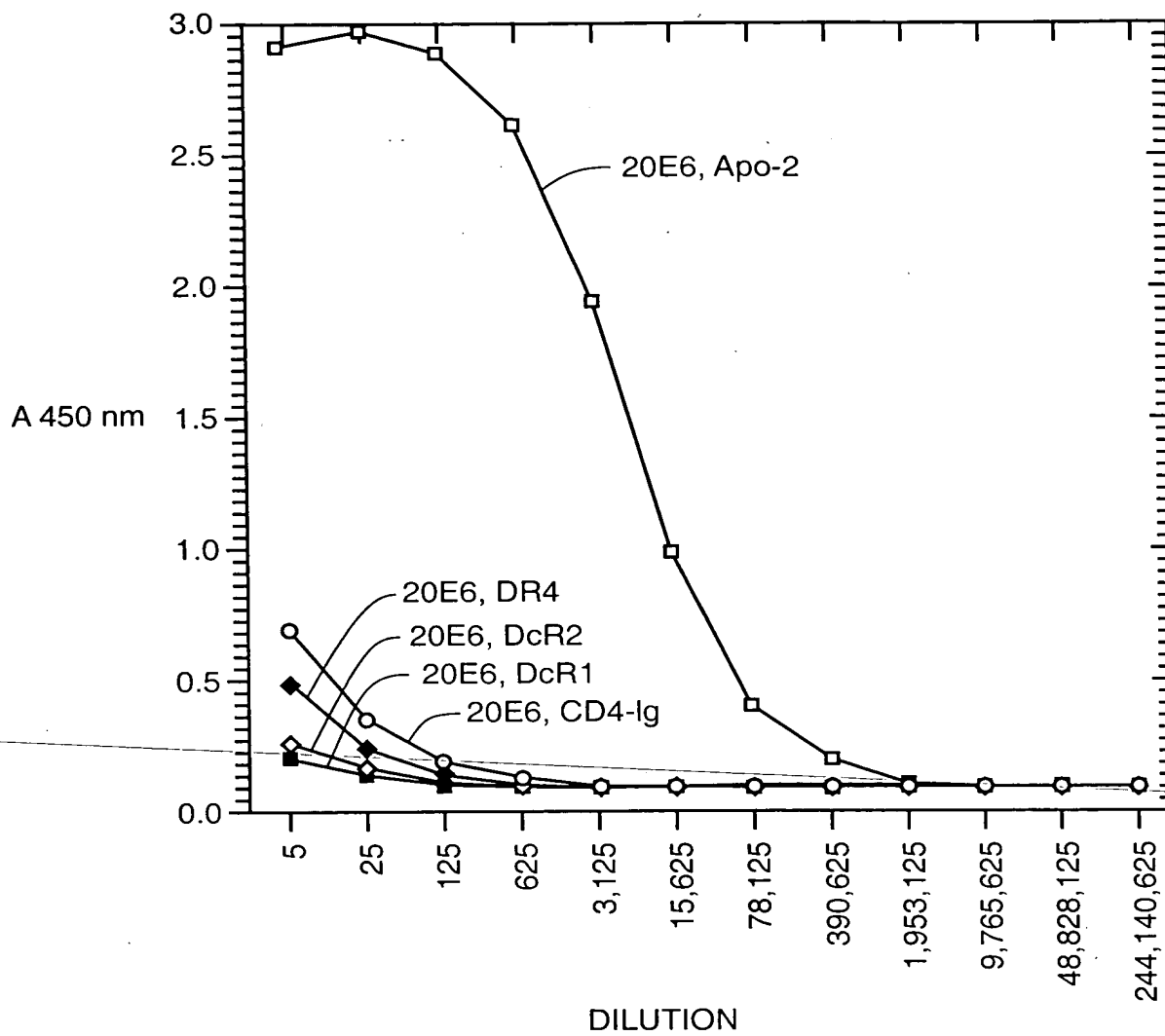
**FIG.\_11**



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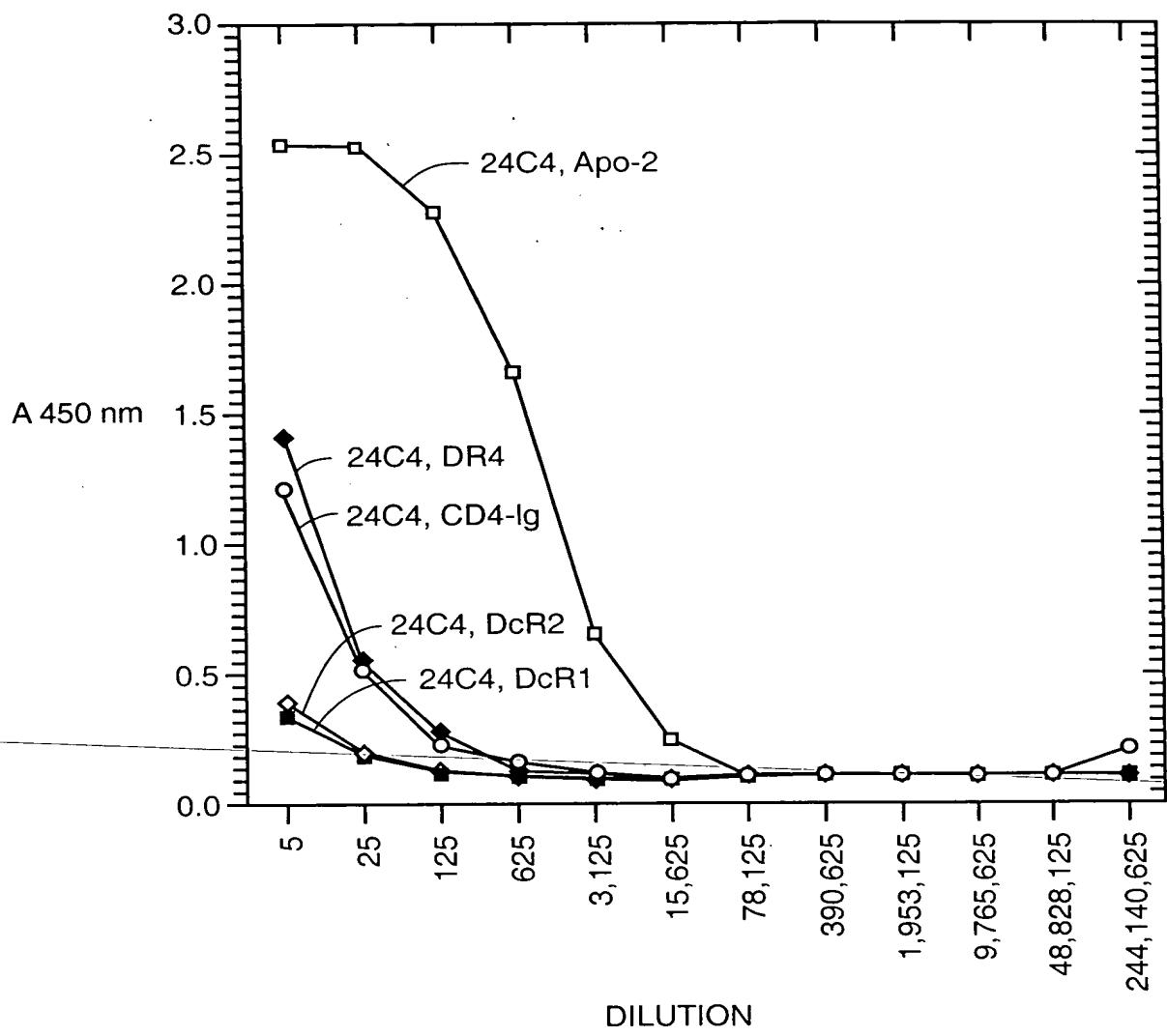


**FIG. 12A**



**FIG. 12B**

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**FIG. 12C**

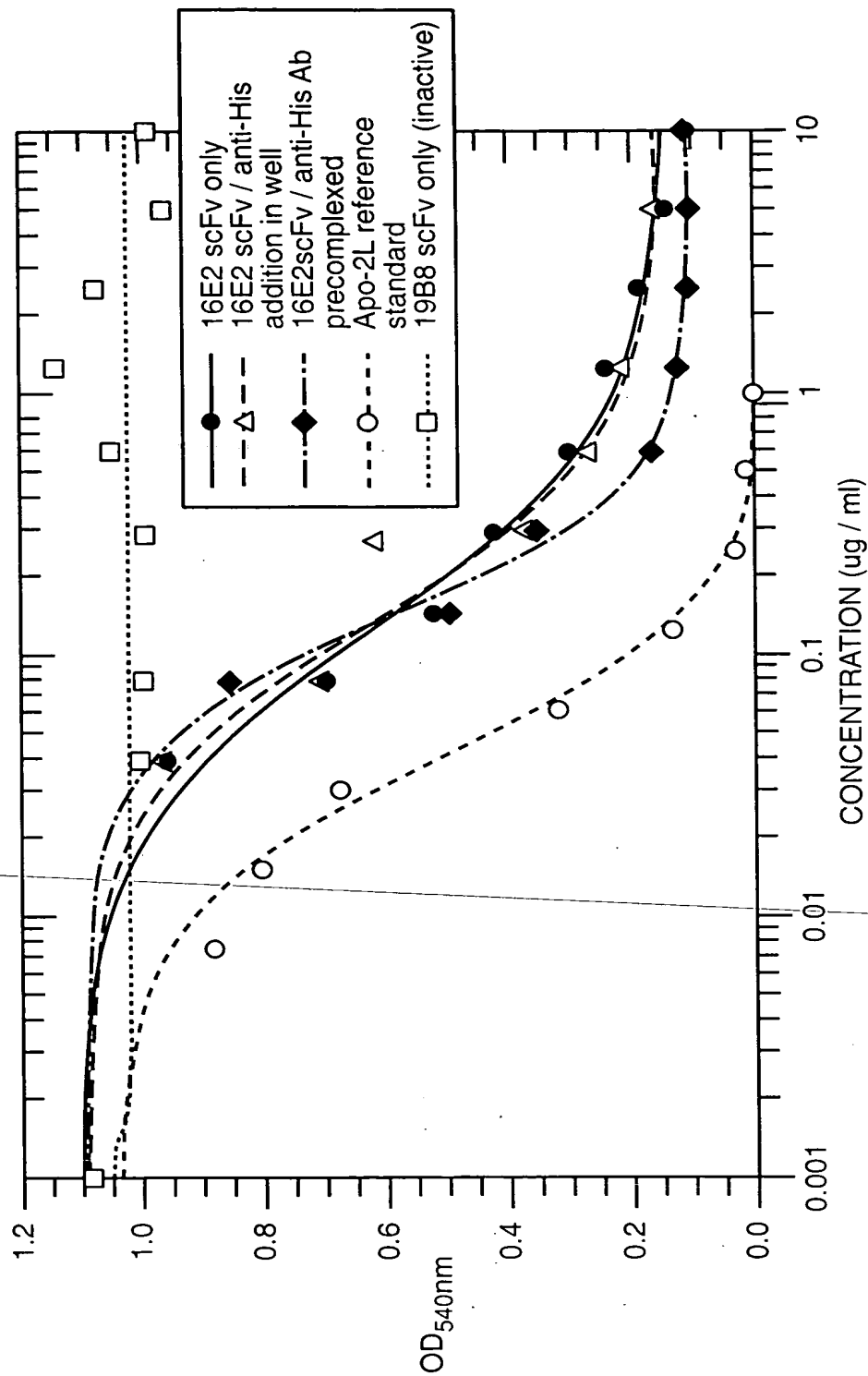
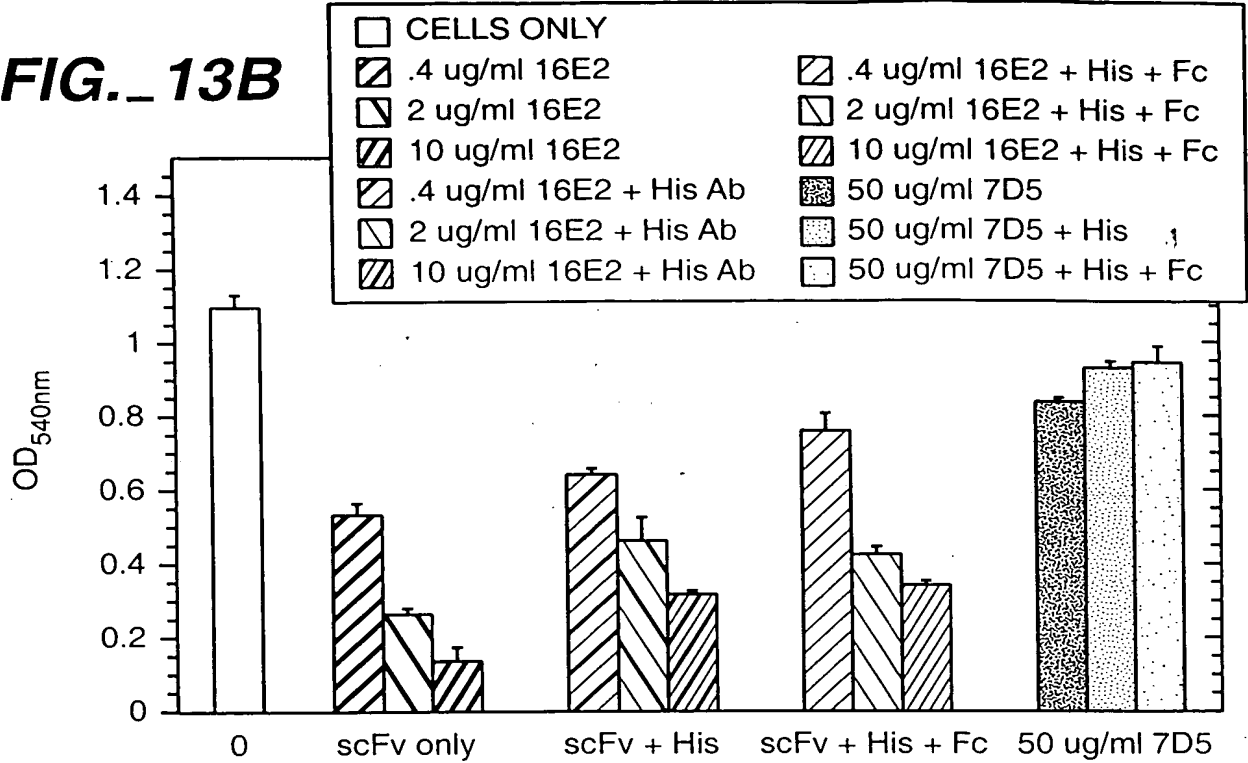


FIG.-13A

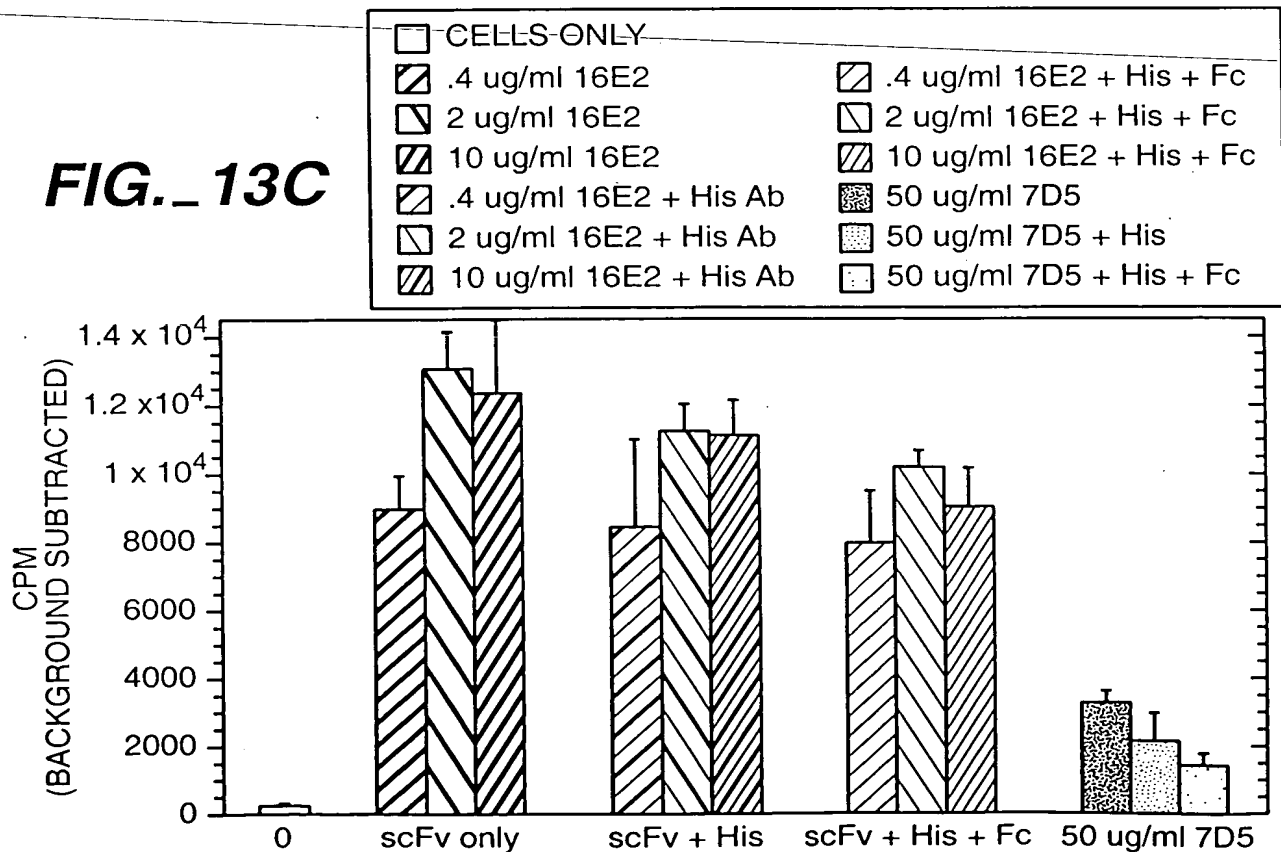
Apo-2L REFERENCE STANDARD	
VALUE	ERROR
m1	1.0383
m2	1.4661
m3	0.040308
m4	-0.023006
Chisq	0.013011
R	0.99551

16E2 scFv ONLY	
VALUE	ERROR
m1	1.105
m2	1.1094
m3	0.12447
m4	0.13897
Chisq	0.011781
R	0.99448

**FIG. 13B**



**FIG. 13C**



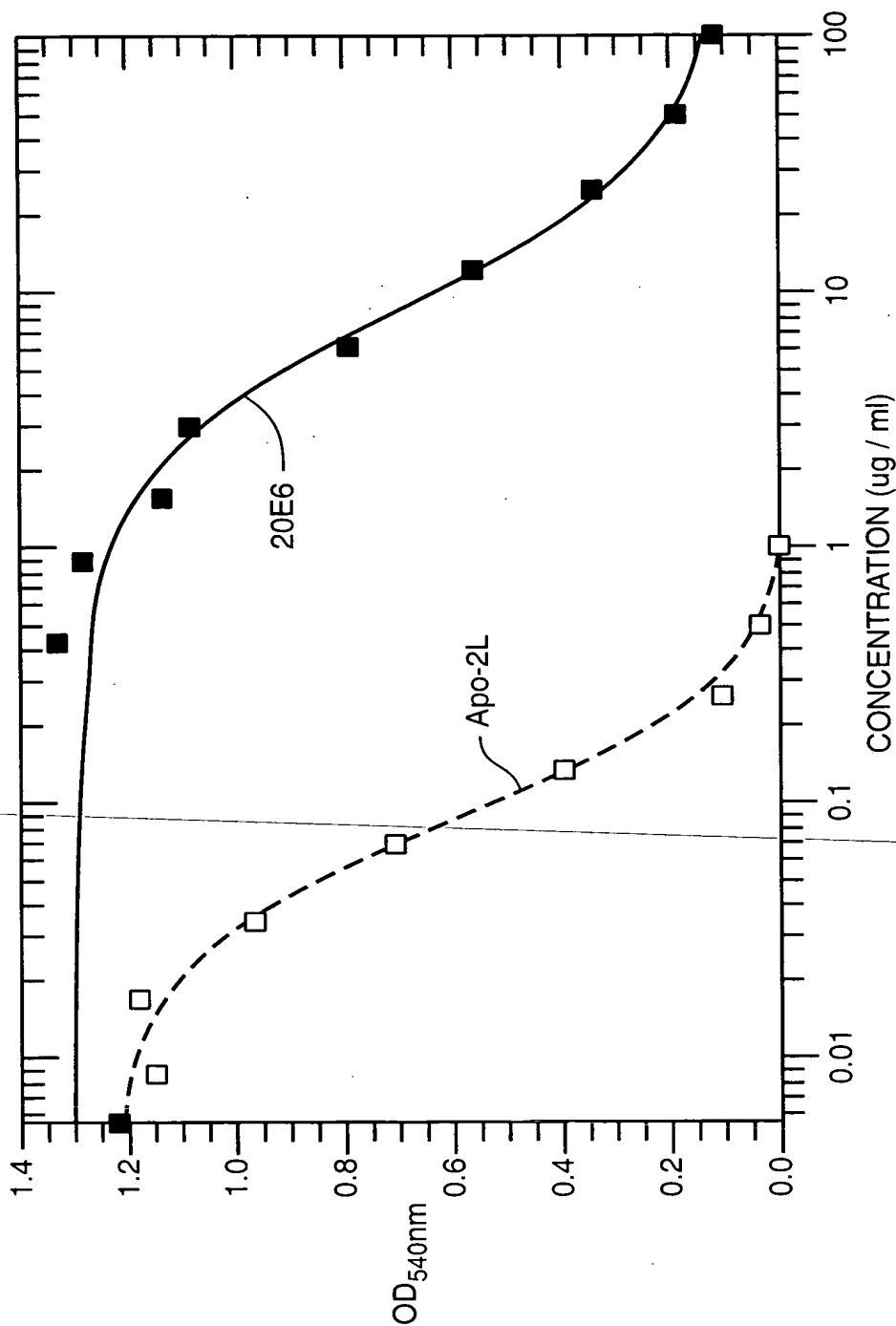
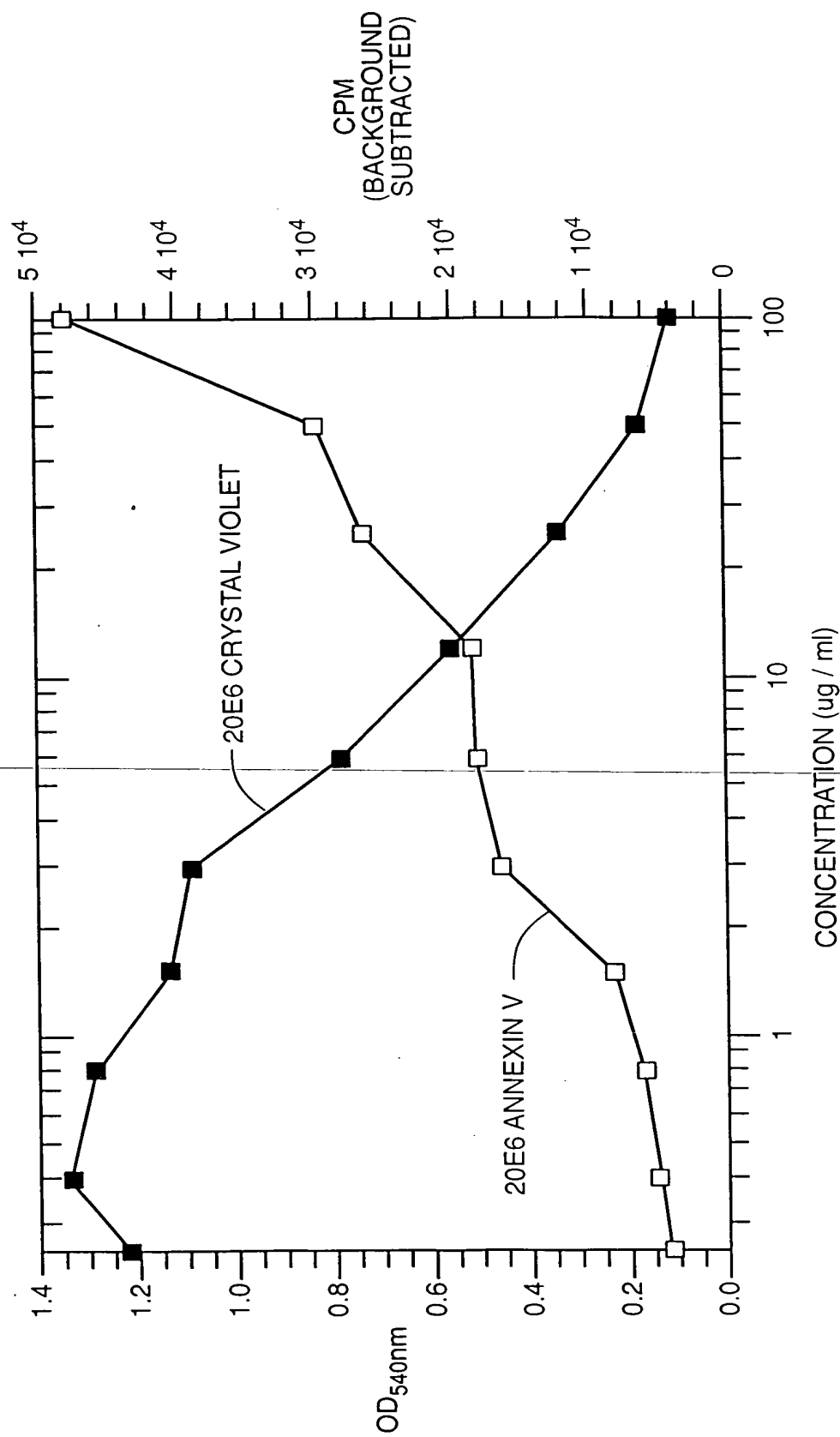


FIG. 14A

Apo-2L			scFv 20E6		
	VALUE	ERROR		VALUE	ERROR
m1	1.2216	0.028142	m1	1.2948	0.038022
m2	1.6356	0.17759	m2	1.3318	0.22832
m3	0.0780	0.00529	m3	8.6124	1.2249
m4	-0.025859	0.033322	m4	0.077139	0.068356
Chisq	0.0058166	NA	Chisq	0.017679	NA
R	0.99864	NA	R	0.99565	NA



**FIG. 14B**



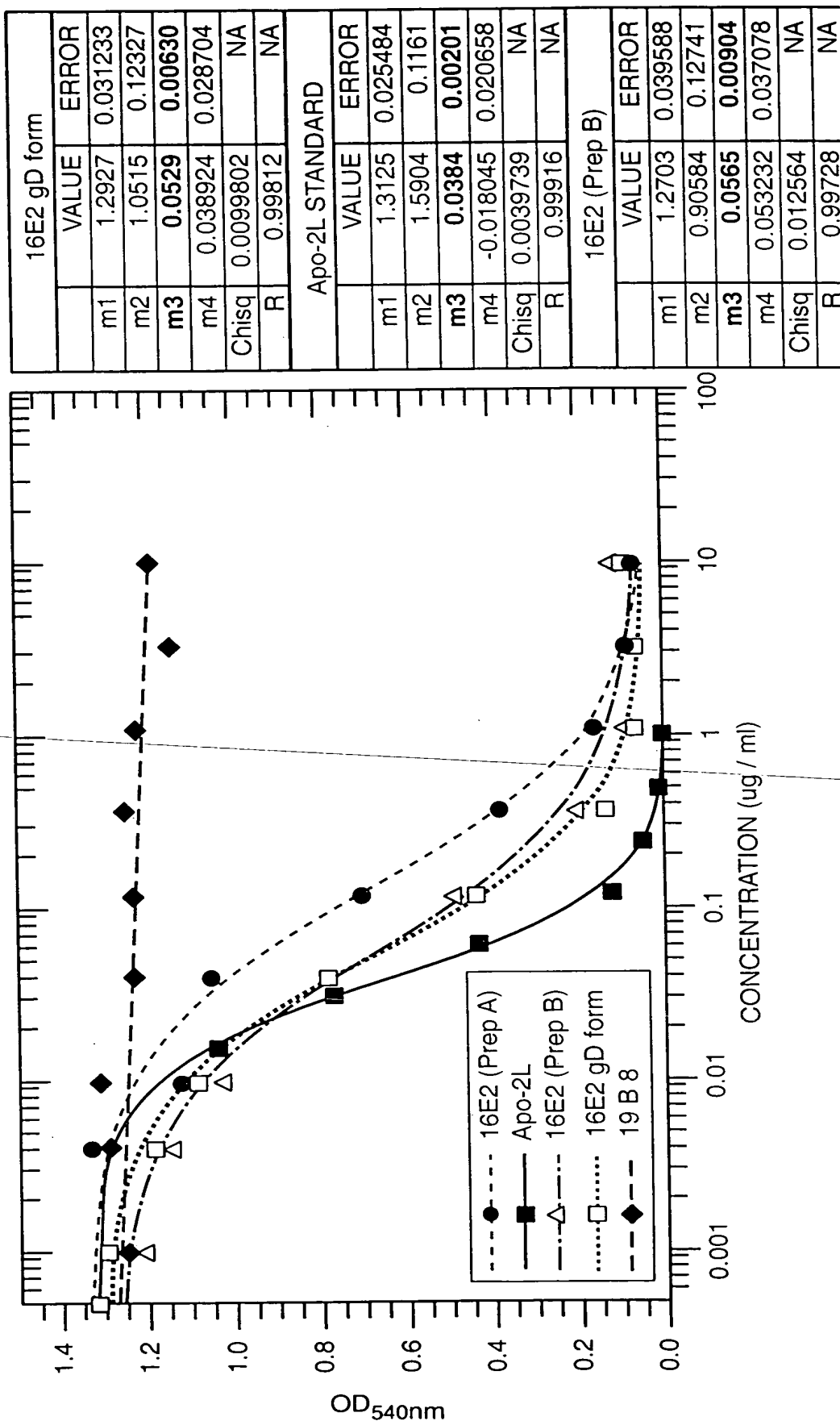


FIG. 14C

ATGACCATGA TTACGCCAAG CTTTGGAGCC TTTTTTTTGG AGATTTTCAA 50  
 CGTGAAAAAA TTATTATTCG CAATTCCTTT AGTTGTTTCCT TTCTATGCGG 100  
 CCCAGCCGGC CATGGCCGAG GTGCAGCTGG TGCAGTCTGG GGGAGGTGTG 150  
 GAACGGCCGG GGGGGTCCCT GAGACTCTCC TGTGCAGCCT CTGGATTACAC 200  
 CTTTGATGAT TATGGCATGA GCTGGGTCCG CCAAGCTCCA GGGAAGGGGC 250  
 TGGAGTGGGT CTCTGGTATT AATTGGAATG GTGGTAGCAC AGGATATGCA 300  
 GACTCTGTGA AGGGCCGAGT CACCATCTCC AGAGACAACG CCAAGAACTC 350  
 CCTGTATCTG CAAATGAACA GCCTGAGAGC CGAGGACACG GCCGTATATT 400  
 ACTGTGCGAA AATCCTGGGT GCCGGACGGG GCTGGTACTT CGATCTCTGG 450  
 GGGGAAGGGGA CCACGGTCAC CGTCTCGAGT GGTGGAGGCG GTTCAGGCGG 500  
 AGGTGGCAGC GCGGGTGGCG GATCGTCTGA GCTGACTCAG GACCCTGCTG 550  
 TGTCTGTGGC CTTGGGACAG ACAGTCAGGA TCACATGCCA AGGAGACAGC 600  
 CTCAGAAGCT ATTATGCAAG CTGGTACCAG CAGAAGCCAG GACAGGCCCC 650  
 TGTACTTGTC ATCTATGGTA AAAACAACCG GCCCTCAGGG ATCCCAGACC 700  
 GATTCTCTGG CTCCAGCTCA GGAAACACAG CTTCTTGAC CATCACTGGG 750  
 GCTCAGGCGG AAGATGAGGC TGA CTATTAC TGTA ACTCC GGGACAGCAG 800  
 TGGTAACCAT GTGGTATTCG GCGGAGGGAC CAAGCTGACC GTCCTAGGTG 850  
 CGGCCGCACA TCATCATCAC CATCACGGGG CCGCAGAACA AAAACTCATC 900  
 TCAGAAGAGG ATCTGAATGG GGCCGCATAG 930

**FIG. 15A**

ATGACCATGA TTACGCCAAG CTTTGGAGCC TTTTTTTTGG AGATTTTCAA 50  
 CGTGAAAAAA TTATTATTCG CAATTCCTTT AGTTGTTTCCT TTCTATGCGG 100  
 CCCAGCCGGC CATGGCCGGG GTGCAGCTGG TGGAGTCTGG GGGAGGCTTG 150  
 GTCCAGCCTG GGGGGTCCCT GAGACTCTCC TGTGCAGCCT CTGGATTACAC 200  
 CTTTAGTAGC TATTGGATGA GCTGGGTCCG CCAGGCTCCA GGGAAGGGGC 250  
 TGGAGTGGGT GGCCAACATA AAGCAAGATG GAAGTGAGAA ATACTATGTG 300  
 GACTCTGTGA AGGGCCGATT CACCATCTCC AGAGACAACG CCAAGAACTC 350  
 ACTGTATCTG CAAATGAACA GCCTGAGAGC CGAGGACACG GCTGTGTATT 400  
 ACTGTGCGAG AGATCTTTTA AAGGTCAAGG GCAGCTCGTC TGGGTGGTTC 450  
 GACCCCTGGG GGAGAGGGAC CACGGTCACC GTCTCGAGTG GTGGAGGCGG 500  
 TTCAGGCGGA GGTGGTAGCG GCGGTGGCGG ATCGTCTGAG CTGACTCAGG 550  
 ACCCTGCTGT GTCTGTGGCC TTGGGACAGA CAGTCAGGAT CACATGCCAA 600  
 GGAGACAGCC TCAGAAGCTA TTATGCAAGC TGGTACCAGC AGAAGCCAGG 650  
 ACAGGCCCCCT GTACTTGTC TCTATGGTAA AAACAACCGG CCCTCAGGGA 700  
 TCCCAGACCG ATTCTCTGGC TCCAGCTCAG GAAACACAGC TTCCTTGACC 750  
 ATCACTGGGG CTCAGGCGGA AGATGAGGCT GACTATTACT GTA ACTCCCG 800  
 GGACAGCAGT GGTAACCATG TGGTATTCGG CGGAGGGACC AAGCTGACCG 850  
 TCCTAGGTGC GGCCGCACAT CATCATCACC ATCACGGGGC CGCAGAACAA 900  
 AAACATCATCT CAGAAGAGGA TCTGAATGGG GCCGCATAG 939

**FIG. 15B**



